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Docket No. 60,130-1109
01MRA0216

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Heaton, et al.
Serial No.:	09/915,805
Filed:	07/26/2001
Group Art Unit:	3683
Examiner:	Torres, Melanie
Title:	SPRING APPLIED ELECTRONIC RELEASE PARKING BRAKE

APPEAL BRIEF

Mail Stop AF
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant filed a Notice of Appeal on April 3, 2003. Appellant now submits its brief in this matter. A check in the amount of $320.00 is enclosed.

Real Party in Interest

ArvinMeritor Technology, LLC is the real party in interest.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of the Claims

Claims 15-20 stand finally rejected. Claims 15 and 17-19 are rejected under 35 U.S.C. §102(e). Claims 16 and 20 are rejected under 35 U.S.C. §103.

Status of Amendments

An Amendment After Final will be entered as indicated in the Advisory Action. That Amendment includes a minor change to independent claim 15 to address an issue under §112 that was raised by the Examiner. Applicant does not address the §112 issues raised in the Final Office Action because the Examiner indicated in the Advisory Action that the Amendment and arguments presented overcame the §112 issues.[1]

Summary of the Invention

Most vehicles include wheel brakes. Some vehicles includes driveline parking brakes that prevent movement of an otherwise moveable driveline component (i.e., a drive shaft) to provide a parking brake function. Such driveline parking brakes are most commonly found on so-called off highway vehicles (i.e., heavy off road machinery) and on some heavy duty vehicles (such as large trucks). Driveline parking brakes typically use lever and+ cable arrangements where a vehicle operator manually pulls a lever to set the driveline parking brake. Releasing the

[1] The Examiner has objected to the specification for not containing the words "driveline component" as used in the claims. In an unentered Amendment after Final, Applicant attempted to amend the specification to include language that is word-for-word with the pending claims. That proposed Amendment was not entered because the Examiner stated that it presented new issues for further consideration. Applicant believes that the language of the claims is fully supported by the specification and drawings as originally filed. Applicant is still willing to make the amendments to the specification as presented in the proposed Amendment field on February 21, 2003 where paragraphs 14 and 17 were proposed to be amended to include a specific recitation of the "driveline component" language from the claims.

brake in such arrangements is typically done manually by the operator of the vehicle moving the lever in a direction opposite from that used to set the parking brake. (Paragraph 5, page 1).

This invention provides a driveline parking brake that utilizes a spring force to place the parking brake into a braking condition and includes an electrically powered actuator for releasing the brake. (Paragraph 7, page 2).

An example parking brake assembly designed according to this invention includes a housing portion 42 that is rotationally fixed with the drive shaft 30 so that the housing portion 42 rotates with the drive shaft 30. An engaging portion 42 is supported to selectively engage the housing 42 to provide a braking force when the engaging portion is in a braking position. An actuator portion 46 includes a mechanical spring that moves a lever 48 to cause the engaging portion 44 to move into the braking position. The actuator portion 46 also includes an electrically powered actuator 60 that operates against the bias of the spring to release the parking brake assembly from the braking position. (Paragraph 15, page 3; paragraph 19, page 4).

Independent claim 15 recites a moveable driveline component and a stationary driveline component that remains stationary relative to a portion of a vehicle. A braking member and engaging portion provide a braking force that provides a parking brake feature for preventing the moveable driveline component from moving. A spring biases the engaging portion into the braking position. An electrically powered actuator selectively moves the spring and releases the engaging portion out of the braking position. Dependent claims 16-20 add further structural details.

Issues

Whether the final rejection under 35 U.S.C. §102(e) is proper when the cited reference nowhere discloses a driveline parking brake arrangement in any form.

Whether the final rejections under 35 U.S.C. §103 are proper where the proposed combination of references does not result in the claimed invention.

Grouping of Claims

Claims 15 and 17-19 stand or fall together for purposes of this appeal.

Claim 16 stands alone.

Claim 20 stands alone.

Argument

INTRODUCTION

The claims are not anticipated because the cited reference does not show a vehicle driveline parking brake in any form. There is simply no teaching of a braking arrangement for use with moveable and stationary driveline components as claimed. The claims are not obvious because the proposed combination of references does not result in the claimed invention.

THE CITED REFERENCES

A. United States Patent No. 6,267,207 ("the *Fleischer* reference")

The *Fleischer* reference discloses a wheel brake actuating mechanism that includes an electric motor for releasing a braking force provided by a mechanical spring. The main contribution to the art of the *Fleischer* reference is a "blocking member" that is shown as an engaging pawl and a cooperating wheel that operates to resist the bias of the mechanical spring to keep the brake released even if the electric motor is not powered for doing so.

Importantly, the *Fleischer* reference only teaches using the disclosed arrangement in associated with a ***wheel brake*** (column 6, lines 11-12). There is no teaching or suggestion within the *Fleischer* reference for providing a parking brake that acts directly on a driveline component. Drivelines and the associated components are typically regarded as separate from the vehicle wheels and wheel brake components.

At best, the *Fleischer* reference teaches a brake actuator having a mechanical spring and an electric motor that operate to apply and release a braking force, respectively. There is no discussion or suggestion as to how the *Fleischer* reference could be used in a vehicle driveline parking brake assembly.

B. United States Patent No. 5,806,638 ("the *Bae* reference")

The Examiner incorrectly relies upon the *Bae* reference to teach a "moveable driveline component 27." The shaft 27 in the *Bae* reference is a shaft about which the cam 25 of the wheel braking arrangement of the *Bae* reference moves. (Column 3, line 15). The shaft 27 is not a driveline component, but instead is a wheel brake system component. The *Bae* reference

does not provide any indication that any of its components is useful for providing a parking brake feature that directly applies a braking force to a driveline component.

THE REJECTIONS UNDER 35 U.S.C. §102(e)

The Examiner has rejected claims 15 and 17-19 under 35 U.S.C. §102(e), based upon the *Fleischer* reference. The Examiner does not provide a stated explanation as to what portions of the *Fleischer* reference correspond to each of the claimed elements. For example, there is no statement by the Examiner as to what within the *Fleischer* reference constitutes a moveable driveline component or a stationary driveline component. Nor is there any discussion of how the *Fleischer* reference allegedly includes a braking member associated with a moveable driveline component such that the two move together or remain stationary together.

THE REJECTIONS UNDER 35 U.S.C. §103

The Examiner has rejected claim 16 over the combination of the *Fleischer* reference with the *Bae* reference. The Examiner reasons that *Bae* discloses a drum that is "fixed from rotation on a driveline shaft." The Examiner, however, nowhere describes how *Bae* or *Fleischer, et al.* disclose a driveline shaft.

The Examiner has rejected claim 20 over the combination of *Bae* with the *Fleischer* reference. In lodging the rejection against claim 20, the Examiner alleges that the shaft 27 of the *Bae* reference is "a moveable driveline component." The shaft 27 in the *Bae* reference, however, is an internal component within the braking arrangement of the *Bae* reference and is not a driveline component.

THE REJECTION UNDER 35 U.S.C. §102(e) IS IMPROPER

The *Fleischer* reference nowhere discloses or even suggests a driveline parking brake assembly having a moveable driveline component and a stationary driveline component as claimed. Further, there is no teaching within *Fleischer* of a braking member that remains fixed relative to the moveable driveline component. Accordingly, at least three of the claimed elements are not shown in the *Fleischer* reference. If even one were missing, there would be no anticipation. Since at least three are missing, there clearly is no anticipation.

It is not possible for the Examiner to contend that the *Fleischer* reference inherently discloses the missing claimed elements. The *Fleischer* reference specifically teaches that it is applicable to a wheel brake, which is significantly different than a driveline parking brake assembly where a braking force is applied directly to prevent movement of a driveline component (i.e., a drive shaft).

THE REJECTIONS UNDER 35 U.S.C. §103 ARE IMPROPER

Claim 16 cannot be considered obvious over the combination of the *Fleischer* reference with the *Bae* reference. Even if there were a motivation for making the combination, the result is not the same as the claimed invention. In rejecting claim 16, the Examiner is essentially citing *Bae* for disclosing a brake drum. Even if that were used in combination with the actuator of the *Fleischer* reference, the result would not be a driveline parking brake assembly. There is no disclosure or suggestion of a stationary driveline component, a moveable driveline component or a braking member that cooperates with the moveable driveline component as claimed. Accordingly, the proposed combination does not result in the claimed invention.

When making the rejection against claim 20, the Examiner contends that the shaft 27 in the *Bae* reference is a moveable driveline component. That is not true. The shaft 27 is a brake shaft internal to the brake device of the *Bae* reference. There is not even any suggestion that the braking device of the *Bae* reference is useful as a driveline parking brake. It is not a fair interpretation of the references to interpret a brake component of a wheel brake assembly as a driveline component. Driveline components typically include the transmission, drive shaft and some axle components. Wheels and wheel brakes are recognized as separate components. It is not a fair interpretation of the references to construe the shaft 27 of the *Bae* reference as a driveline component.

CLAIMS 15 AND 17-19 ARE ALLOWABLE

As described above, the *Fleischer* reference does not anticipate the claims. The *Fleischer* reference discloses a particular brake actuator mechanism that is useful with a wheel brake. There is no disclosure of the claimed components that provide a driveline parking brake. There is no anticipation.

Claim 15 includes a stationary driveline component and a moveable driveline component. Additionally, there is a specifically claimed relationship between a braking member and the moveable driveline component. The claimed spring moves the claimed engaging portion into a braking position to engage the braking member to prevent movement of the moveable driveline component. The claimed electrically powered actuator selectively moves the spring and releases the engaging portion out of the braking position. These elements are not shown or suggested by the *Fleischer* reference.

Claim 18 specifically recites that the stationary driveline component is a transmission housing while claim 19 specifically recites that the stationary driveline component is an axle assembly.

None of the claims are anticipated.

CLAIM 16 IS ALLOWABLE

The rejection under 35 U.S.C. §103 does not establish that claim 16 is obvious. The elements missing from the *Fleischer* reference are not found in the *Bae* reference and, therefore, even if the combination could be made it is not the same as the claimed invention. Even the drum of the *Bae* reference is not disclosed or suggested as being associated with a moveable driveline component like the arrangement recited in claim 16.

CLAIM 20 IS ALLOWABLE

Claim 20 cannot be considered obvious because the proposed combination is not the same as the claimed invention. The Examiner contends that the shaft 27 within the braking arrangement of the *Bae* reference is a moveable driveline component. That is not true. The combination of references fails to provide the claimed invention. Even if it were, there is no associated braking member as claimed. Neither reference, nor their combination, includes the stationary or moveable driveline components or the braking member, for example.

CONCLUSION

The references fail to teach or suggest the claimed invention. Even the proposed combinations do not result in the claimed arrangement. The rejections should be reversed.

Respectfully solicited,

CARLSON, GASKEY & OLDS, P.C.

June 3, 2003
Date

David J. Gaskey
Registration No. 37,139
400 W. Maple, Suite 350
Birmingham, MI 48009
(248) 988-8360

CERTIFICATE OF MAIL

I hereby certify that the enclosed **Appeal Brief and Fees** is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on June 3, 2003.

Theresa M. Palmateer

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APPENDIX OF CLAIMS

15. A vehicle driveline parking brake assembly, comprising:

a moveable driveline component;

a stationary driveline component that remains stationary relative to a portion of a vehicle;

a braking member associated with the moveable driveline component such that the braking member remains stationary relative to the moveable driveline component;

an engaging portion associated with the stationary driveline component, the engaging portion is selectively moveable into a braking position where the engaging portion engages the braking member;

a spring that biases the engaging portion into the braking position; and

an electrically powered actuator that selectively moves the spring and releases the engaging portion out of the braking position.

16. The assembly of claim 15, wherein the braking member comprises a drum that is fixed for rotation on a driveline shaft that is rotatable relative to the stationary driveline component.

17. The assembly of claim 15, wherein the electrically powered actuator maintains the spring in a compressed position to keep the engaging portion out of the braking position.

18. The assembly of claim 15, wherein the engaging portion is at least partially supported on a transmission housing such that when the engaging portion moves into the braking position, the braking member and the associated moveable driveline component does not move relative to the transmission housing.

19. The assembly of claim 15, wherein the engaging portion is at least partially supported on an axle assembly such that when the engaging portion moves into the braking position, the braking member remains stationary relative to the axle assembly.

20. The assembly of claim 15, wherein the braking member comprises a drum housing, the engaging portion comprises a duplex cam having brake pads that are moveable in a generally outward direction to selectively engage an inner surface on the housing and the spring bias moves toward the engaging portion to move the brake pads in the outward direction.

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